having an output wherein said

9/4/06 mm

IN THE CLAIMS:

1. (Currently amended) An electronically tuned circuit, comprising a power amplifier coupled to provide amplified signal to an electronically tunable output network, said power amplifier capable of being operated in a large-signal mode, said output network including an electronically tunable reactive component, a control line, and a control input, wherein said control input is connected to a time varying non-AC tuning input signal, wherein electronic tuning of said electronically tunable reactive component includes non-motor operated electronic tuning when said power amplifier is operated in said large-signal mode, wherein said control line extends to said electronically tunable reactive component for providing a control signal derived from said time varying tuning input signal, wherein said control signal varies over more than two values for electronically varying reactance of said electronically tunable reactive component over more than two values, wherein said time varying non AC tuning input signal is ~~independent of a signal said amplified signal by said power amplifier~~. not derived from said amplifier output.

9/4/06 mm

9-4-06 mm

2. (Previously presented) An electronically tuned circuit as in claim 1, wherein said varying reactance of said electronically tunable reactive component tunes said output network to a selected frequency.

3. (Previously presented) An electronically tuned circuit as in claim 1, wherein said varying reactance of said electronically tunable reactive component tunes said output network to maintain a match between said output network and a varying load impedance.

4. (Previously presented) An electronically tuned circuit as in claim 1, wherein said varying reactance of said electronically tunable reactive component adds modulation to a large signal in said output network.

40. (Currently amended) An electronically tuned circuit comprising:

having an output

(a) means for power amplifying, wherein said means for power amplifying comprises a large-signal mode; and

(b) means for electronic tuning of said means for power amplifying when said means for power amplifying is operating in said large signal mode, wherein said means for electronic tuning is coupled to said means for power amplifying for receiving an amplified signal, wherein said means for electronic tuning comprises an electronically tunable reactive component, a control line, and a control input, said control input available for connection from external to said means for electronic tuning, further wherein said control input is connected to a time varying non-DC tuning input signal, wherein said electronically tunable reactive component includes non-motor operated electronic tuning, wherein said control line extends to said electronically tunable reactive component for providing a control signal derived from said time varying non-DC tuning input signal, wherein said control signal varies over more than two values for electronically varying reactance of said electronically tunable reactive component over more than two values, wherein said time varying non-DC tuning input signal is ~~independent of a signal said amplified signal by said power amplifier~~.

not derived from said amplifier output

41. (Previously presented) An electronically tuned circuit as in claim 40, wherein said means for power amplifying operates in class E and said electronic-tuning means is capable of being tuned to provide a reactance for optimum class-E operation for a selected frequency.

56. (Currently amended) An electronically tuned circuit, comprising one or more power amplifiers, wherein said power amplifiers are capable of operating in a large-signal mode, further wherein said one or more power amplifiers has an output network for receiving an amplified signal, said output network including a tuning input, anetwork output, an electronically tunable reactive component, a control line, wherein said tuning input is connected to a time varying tuning input signal, wherein electronic tuning of said electronically tunable reactive component includes non-motor operated electronic tuning when said one or more power amplifiers are operating in said large-signal mode, wherein said control line extends to said electronically tunable reactive component for providing a control signal derived from said time varying tuning input signal, wherein said control signal varies over more than two values for electronically varying reactance of said electronically tunable reactive component over more than two values, wherein said time varying tuning input signal is ~~independent of a signal~~ said amplified signal ~~by said power amplifier~~.

57. (Previously presented) An electronically tuned circuit as in claim 56, wherein said varying reactance of said electronically tunable reactive component tunes said output network to a fixed or variable frequency.

58. (Previously presented) An electronically tuned circuit as in claim 56, wherein said varying reactance of said electronically tunable reactive component tunes said output network to maintain a match with a varying load impedance at said network output.

59. (Previously presented) An electronically tuned circuit as in claim 56, wherein said varying reactance of said electronically tunable reactive component adds modulation to a large signal in said output network.